

Appendix 2: Agreement scores of authors with NIV guideline statements

	Author (identified by letter); level of agreement*																		
Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
Acute respiratory failure																			
Severe exacerbation of COPD																			
NPPV v. standard therapy	9	9	9	9	9	9	9	9	9	9	9	9	9	8	9	9	9	8	We recommend the use of NPPV in addition to usual care in patients who have a severe exacerbation of COPD (pH < 7.35 and relative hypercarbia)
CPAP v. standard therapy	9	9	9	8	9	9	9	9	9	9	8	9	9	8	9	7	9	8	We make no recommendation about the use of CPAP in patients who have a severe exacerbation of COPD, because of a lack of RCTs
NPPV + heliox v. standard therapy	9	9	9	9	9	9	9	9	9	9	7	9	9	9	9	9	9	8	We suggest that helium–oxygen (heliox) not be routinely used in patients who have a severe exacerbation of COPD and who are receiving NPPV
CPAP + heliox v. standard therapy	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	9	9	8	We make no recommendation about the use of heliox with CPAP in patients who have a severe exacerbation of COPD, because of a lack of RCTs
NPPV v. CMV	8	9	9	9	9	7	9	9	7	9	7	9	9	8	5	5	8	8	We make no recommendation about the use of NPPV versus intubation and conventional mechanical ventilation in patients who have a severe exacerbation of COPD that requires ventilator support, because of insufficient evidence
CPAP v. CMV	9	9	9	9	9	9	9	9	7	9	8	9	9	8	9	9	9	8	We make no recommendation about the use of CPAP in patients who have a severe exacerbation of COPD that requires ventilator support, because of a lack of RCTs

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Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
<i>Exacerbation of asthma</i>																			
NPPV	8	9	9	9	9	9	8	9	9	9	7	9	9	8	4	7	8	8	We make no recommendation about the use of NPPV in patients who have an exacerbation of asthma, because of insufficient evidence
CPAP	9	9	9	9	9	9	9	9	9	9	7	9	9	8	4	5	9	8	We make no recommendation about the use of CPAP in patients who have an exacerbation of asthma, because of a lack of RCTs
<i>Cardiogenic pulmonary edema</i>																			
NPPV or CPAP v. standard therapy	9	9	9	9	9	8	8	7	9	9	8	9	9	9	9	9	9	9	We recommend the use of either NPPV or CPAP in patients who have cardiogenic pulmonary edema and respiratory failure in the absence of shock or acute coronary syndrome requiring acute coronary revascularization
<i>Acute lung injury</i>																			
NPPV v. standard therapy	9	9	9	9	9	9	9	9	9	9	9	9	9	8	5	8	9	8	We make no recommendation about the use of NPPV in patients who have acute lung injury, because of a lack of RCTs
CPAP v. standard therapy	9	9	9	9	9	9	9	9	9	9	8	9	9	9	9	9	9	7	We recommend that CPAP not be used in patients who have acute lung injury
<i>Severe community-acquired pneumonia</i>																			
NPPV v. standard therapy	9	9	9	9	9	9	9	9	9	9	8	9	9	8	9	7	8	8	We make no recommendation about the use of NPPV in patients who have severe community-acquired pneumonia and no prior history of COPD, because of insufficient evidence

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Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
CPAP v. standard therapy	9	9	9	9	9	9	9	9	9	9	8	9	9	8	9	5	9	8	We make no recommendation about the use of CPAP in patients who have severe community-acquired pneumonia and no prior history of COPD, because of a lack of RCTs
Chest trauma																			
NPPV or CPAP (patients without respiratory distress)	8	9	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	8	We make no recommendation about the use of either NPPV or CPAP in patients who have chest trauma without respiratory distress, because of a lack of RCTs
NPPV (patients with respiratory distress)	7	9	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	8	We make no recommendation about the use of NPPV in patients who have chest trauma and respiratory distress, because of a lack of RCTs
CPAP (patients with respiratory distress)	8	9	9	9	9	9	9	9	9	9	8	9	9	8	9	7	9	8	We make no recommendation about the use of CPAP in patients who have chest trauma and respiratory distress, because of insufficient evidence
Immunosuppression in conjunction with acute respiratory distress or failure																			
NPPV v. standard therapy	9	9	9	9	9	8	9	8	9	9	7	9	8	8	9	7	8	5	We suggest that NPPV be used in immunosuppressed patients who have acute respiratory failure
CPAP v. standard therapy	9	9	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	5	We make no recommendation about the use of CPAP in immunosuppressed patients who have acute respiratory failure, because of a lack of RCTs
Bronchoscopy in patients with hypoxemia																			
Bronchoscopy	9	9	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	8	We make no recommendation about the use of either NPPV or CPAP in patients who have hypoxemia and who undergo bronchoscopy, because of insufficient evidence

	Author (identified by letter); level of agreement*																		
Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
After intubation																			
<i>Adjunct to early liberation from mechanical ventilation</i>																			
NPPV v. CMV (patients with COPD)	8	9	9	9	9	8	9	9	6	9	9	8	9	8	7	8	9	8	We suggest that NPPV be used to facilitate early liberation from mechanical ventilation in patients who have COPD, but only in centres that have expertise in NPPV
NPPV v. CMV (patients without COPD)	8	9	9	9	9	9	9	9	9	9	9	9	9	8	6	8	9	8	We make no recommendation about the use of NPPV to facilitate early liberation from mechanical ventilation in patients who do not have COPD, because of insufficient evidence
CPAP v. CMV	9	9	9	9	9	9	9	9	9	9	9	9	9	8	7	7	9	8	We make no recommendation about the use of CPAP to facilitate early liberation from mechanical ventilation, because of a lack of RCTs
<i>Transition to spontaneous breathing after planned intubation</i>																			
NPPV v. standard therapy (high-risk patients)	9	9	9	9	9	8	9	9	9	9	8	9	9	8	7	8	9	8	We suggest that NPPV be used after planned extubation in patients who are considered to be at high risk of recurrent respiratory failure, but only in centres that have expertise in NPPV
NPPV v. standard therapy (low-risk patients)	9	9	9	9	9	8	8	7	9	9	8	9	9	8	7	8	8	4	We suggest that NPPV not be used after planned extubation in patients who are considered to be at low risk of respiratory failure
CPAP v. standard therapy	9	9	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	8	We make no recommendation about the use of CPAP after planned extubation, because of a lack of RCTs

	Author (identified by letter); level of agreement*																		
Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
Treatment for acute respiratory failure after extubation																			
NPPV v. CMV (patients without COPD)	7	9	9	9	9	8	9	9	9	9	7	8	9	9	9	9	9	7	We suggest that NPPV not be routinely used in patients who do not have COPD and who have postextubation respiratory failure
NPPV v. CMV (patients with COPD)	9	9	9	9	9	8	9	9	5	9	7	9	9	8	6	5	9	7	We make no recommendation about the use of NPPV in patients who have COPD and postextubation respiratory failure, because of insufficient evidence
CPAP v. CMV	9	9	9	9	9	9	9	9	9	9	8	9	9	8	9	8	9	7	We make no recommendation about the use of CPAP in patients who have postextubation respiratory failure, because of a lack of RCTs
Postoperative setting																			
Prevention of acute respiratory failure after low-risk surgery																			
NPPV or CPAP (low-risk patients, low-risk surgery)	9	9	9	9	9	8	9	9	9	8	8	8	9	9	9	7	8	9	We make no recommendation about the use of either NPPV or CPAP in low-risk patients after low-risk surgery to prevent respiratory failure, because of insufficient evidence
NPPV or CPAP (cardiac surgery)	9	9	9	9	9	8	9	9	9	8	8	8	9	9	9	9	9	9	We make no recommendation about the use of NPPV to prevent respiratory failure after cardiac surgery, because of a lack of RCTs, and we make no recommendation about the use of CPAP to prevent respiratory failure after cardiac surgery, because of insufficient evidence

	Author (identified by letter); level of agreement*																		
Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
NPPV or CPAP (high-risk patients, low-risk surgery)	9	9	9	9	8	8	9	9	7	9	8	9	9	8	9	8	9	8	We make no recommendation about the use of either NPPV or CPAP in patients at high risk (because of associated comorbidity) to prevent respiratory failure after low-risk surgical procedures, because of insufficient evidence
Prevention of acute respiratory failure after high-risk surgery																			
NPPV or CPAP (high-risk surgery)	9	9	9	9	9	8	8	9	9	8	8	8	9	9	9	7	8	9	We make no recommendation about the use of NPPV to prevent respiratory failure after high-risk surgical procedures, because of a lack of RCTs, and we make no recommendation about the use of CPAP to prevent respiratory failure after high-risk surgical procedures, because of insufficient evidence
Treatment of acute respiratory failure after surgery																			
NPPV (abdominal surgery)	8	9	9	9	9	9	9	9	9	9	8	9	9	8	6	7	9	8	We make no recommendation about the use of NPPV in patients who have respiratory failure after abdominal surgery, because of a lack of RCTs
CPAP (abdominal surgery)	9	9	9	9	9	8	8	7	9	9	7	9	8	8	9	8	9	4	We suggest that CPAP be used in patients who have respiratory failure after abdominal surgery
NPPV (lung resection)	9	9	9	9	9	8	8	7	9	9	7	9	8	8	7	8	9	6	We suggest that NPPV be used in patients who have respiratory failure after lung-resection surgery
CPAP (lung resection)	9	9	9	9	9	9	9	9	9	9	8	9	9	8	7	7	9	8	We make no recommendation about the use of CPAP in patients who have respiratory failure after lung-resection surgery, because of a lack of RCTs

	Author (identified by letter); level of agreement*																		
Treatment	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	Statement
Optimal use of noninvasive ventilation																			
<i>Interface</i>																			
NPPV (oronasal v. nasal mask)	9	9	9	9	9	9	8	8	9	9	7	9	9	9	9	8	9	8	We suggest the use of an oronasal mask rather than a nasal mask in patients who have acute respiratory failure and who are receiving NPPV
NPPV (oronasal v. full face mask)†	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	We make no recommendation about the use of an oronasal mask versus full face mask for NPPV in patients who have acute respiratory failure, because of insufficient evidence
CPAP	9	9	9	9	9	9	9	9	9	9	8	9	8	8	9	7	9	8	We make no recommendation about the use of an oronasal mask versus nasal or full face mask in patients who have acute respiratory failure and who are receiving CPAP, because of a lack of RCTs
<i>Preferred mode for NPPV</i>																			
PSV v. PAV	9	9	9	9	9	9	9	9	9	9	8	9	9	9	9	8	9	8	We make no recommendation about the use of proportional assist ventilation versus pressure support ventilation in patients who are receiving NPPV for acute respiratory failure, because of insufficient evidence

Note: CMV = conventional mechanical ventilation, COPD = chronic obstructive pulmonary disease, CPAP = noninvasive continuous positive airway pressure (by mask), NA = not applicable, NIV = noninvasive ventilation, NPPV = noninvasive positive-pressure ventilation, PAV = proportional assist ventilation, PSV = pressure support ventilation, RCT = randomized controlled trial.

*Agreement was scored on a Likert-type scale from 1 (disagree completely) to 9 (agree completely).

†The statement regarding oronasal v. full face mask was added to reflect a study that was newly identified late in the development of the guideline. Although the authors reached consensus about including this statement, formal agreement scores were not obtained.